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Abstract

A neuromuscular electrical stimulation system provides a series of electrical pulses to instigate muscle twitch to aid in preventing the occurrence of deep vein thrombosis. The duration and duty cycle of the electrical pulses provided to a patient's muscle tissue is controlled to instigate muscle twitch without causing tetanic muscle contractions. The system preferably includes a single electrode that is placed upon each calf of a patient. The electrical stimulator device includes a unique housing (32, 34), and circuit board arrangement (80) that facilitate easy assembly without requiring any soldering connections between the circuit board, a power source (86), and electrical leads that are utilized to provide signals to the electrodes that are placed on the patient. The circuit board (80) preferably is made from a slightly resilient plastic material that is flexed from a disconnected position into an electrically connected position upon assembly of the stimulator device.